

ABSTRACT

A semiconductor device comprises a P⁻-type semiconductor substrate (15), an N⁻-type semiconductor substrate (21) formed on the P⁻-type semiconductor substrate (15), an upper P-type semiconductor region (13) formed in the surface region of the N⁻-type semiconductor substrate (21) and electrically connected to a ground electrode (1), a lower P-type semiconductor region (14) formed beneath the upper P-type semiconductor region (13), a first N⁺-type semiconductor region (22) electrically connected to a drain electrode (2), a P-type semiconductor region (19) functioning as a channel forming region, a P⁺-semiconductor region (12) electrically connected to a back gate electrode (5), a second N⁺-semiconductor region (23) electrically connected to a source electrode (4), and a gate electrode (3) and a gate insulating film (31) both on the P-type semiconductor region (19), and the lower P-type semiconductor region (14) extends toward the first N⁺-type semiconductor region (22).